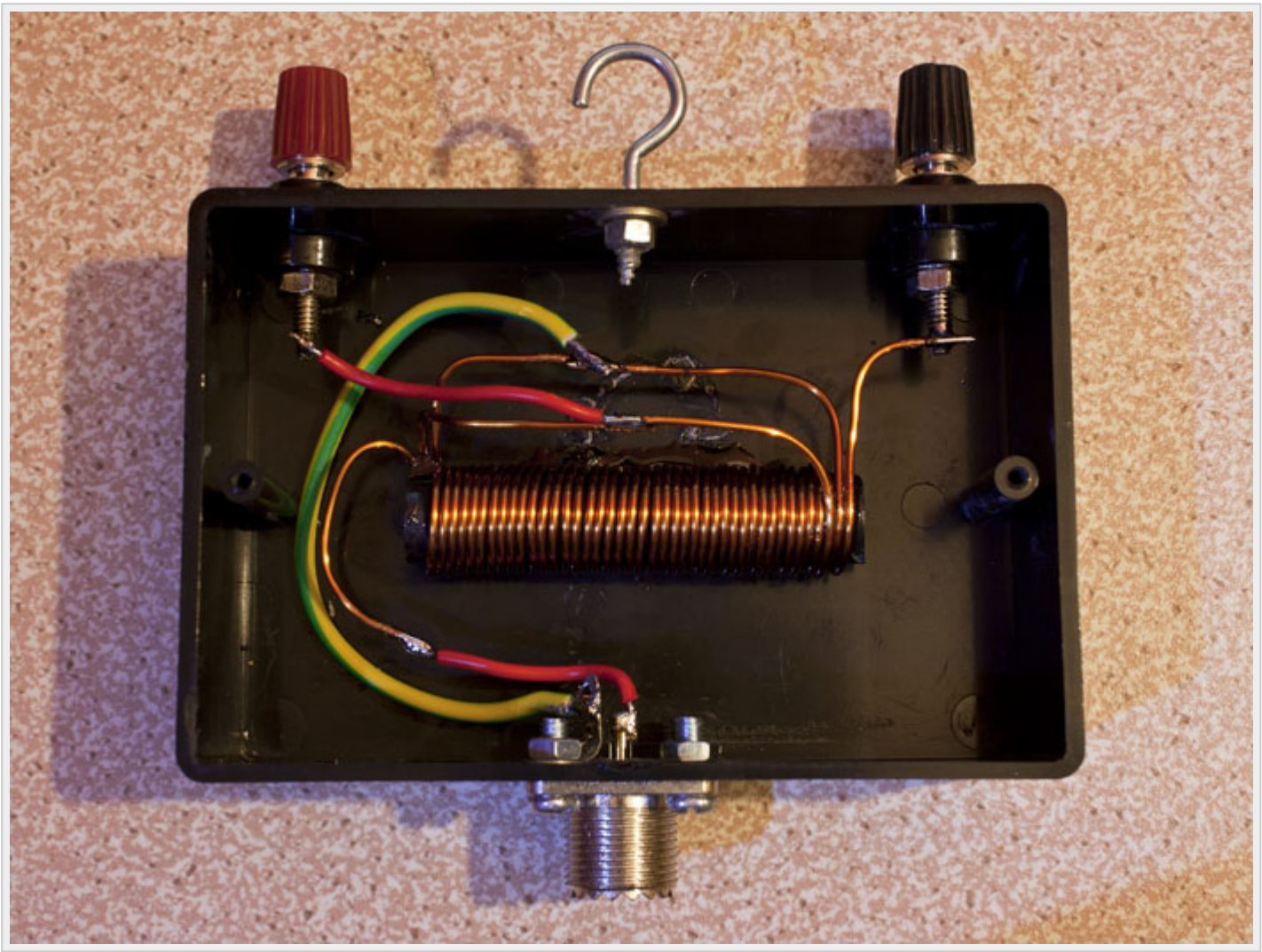
1:1 Voltage Balun for HF wire dipoles

Heres a neat 1:1 50 ohm balun for use on HF horizontal wire dipoles. It uses an AM radio ferrite rod, with 3×14 turns of wire. 10-14 turns should be good for 2-30MHz. I used 18SWG enammeled copper wire. It all fits in a small project box. Great for setting up portable. For 20 metres, I started with 6 metres of wire per element, and trimmed each down until it has minimum S.W.R. I managed to get a 1:1.1 S.W.R. on my desired frequency. Bandwidth from the resonant frequency is about 200KHz either way, any more needs an ATU. The wire and ferrite core I had already, the box, terminal plugs and SO-239 came to about £6. The balun can also be built on a ferrite toroid such as an FT140-43 or FT240-43.



1:1 ferrite rod voltage balun

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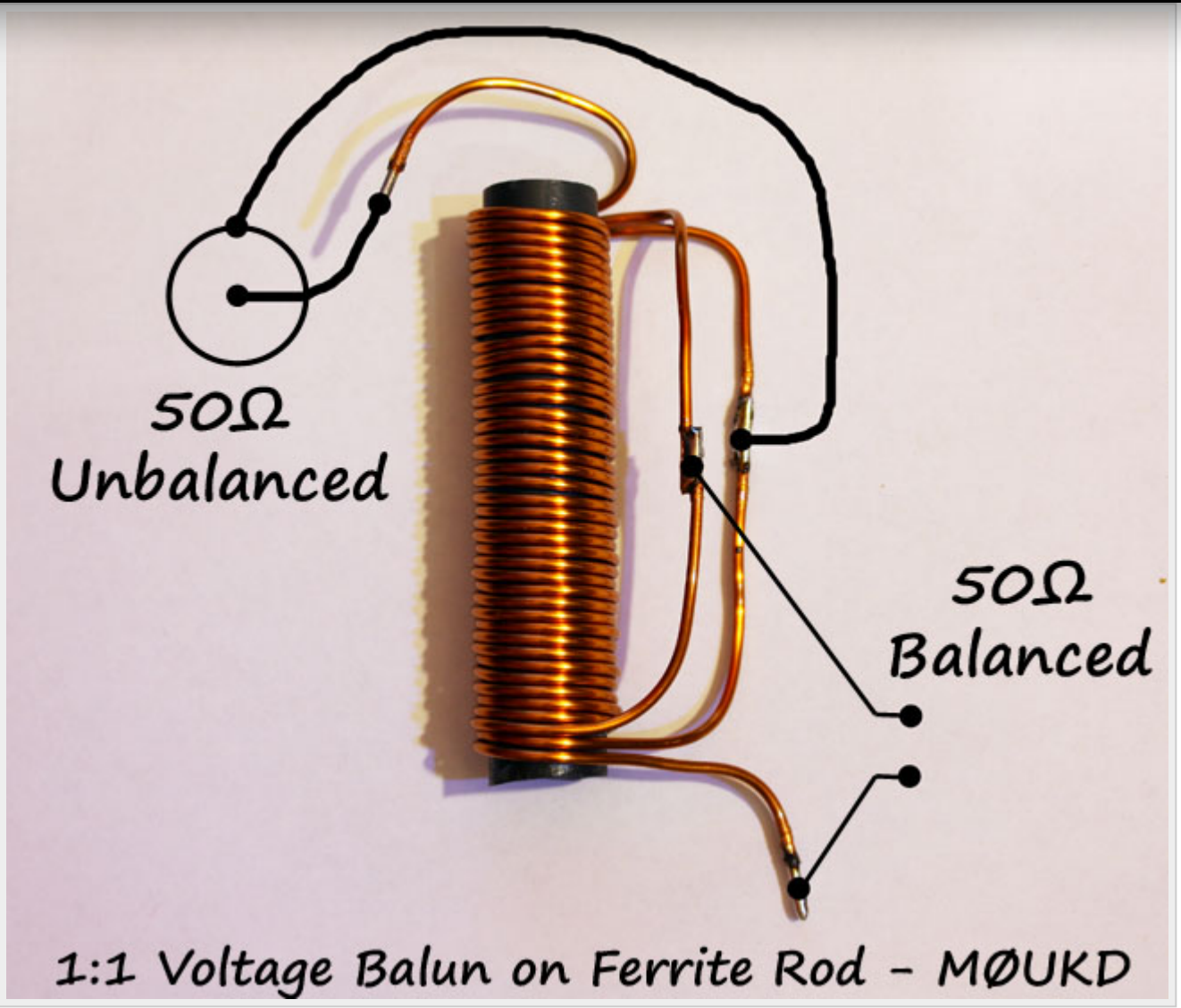

Bandwidth may be increased by more spacing between each trifilar turn. I didn't have room on this tiny ferrite rod, but it performs OK.

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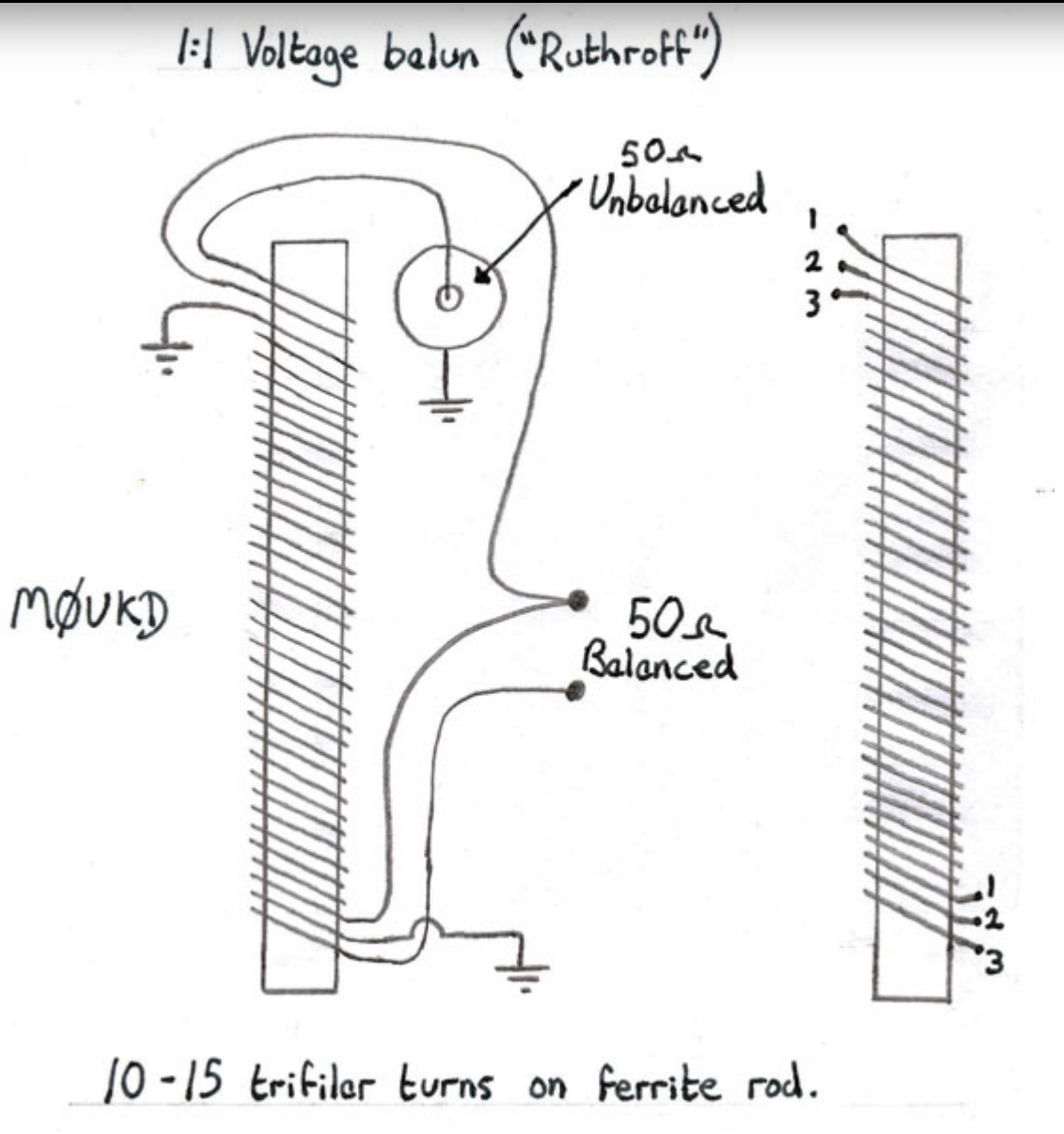

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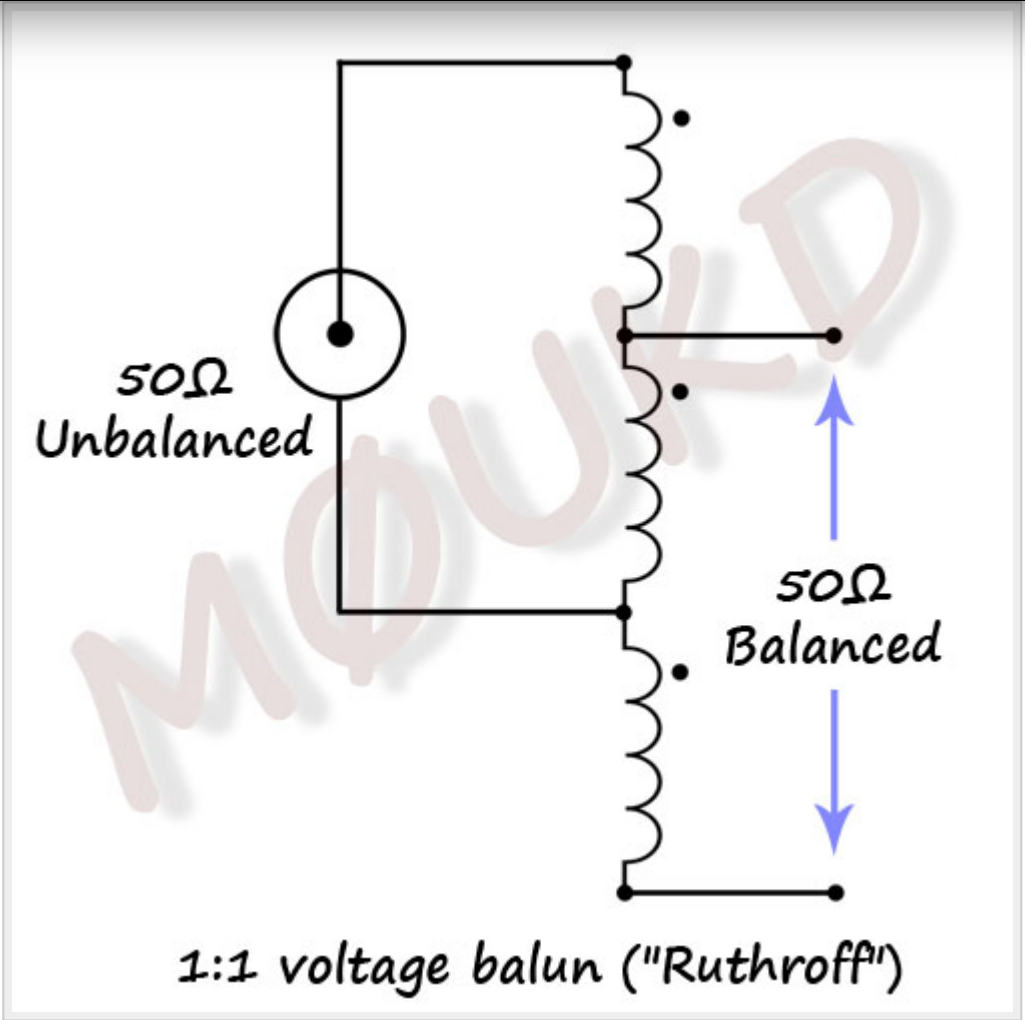

Schematic Diagram

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